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STRUCTURE FILE UPDATES: 1 JUL 2007 HIGHEST RN 940612-32-8
DICTIONARY FILE UPDATES: 1 JUL 2007 HIGHEST RN 940612-32-8

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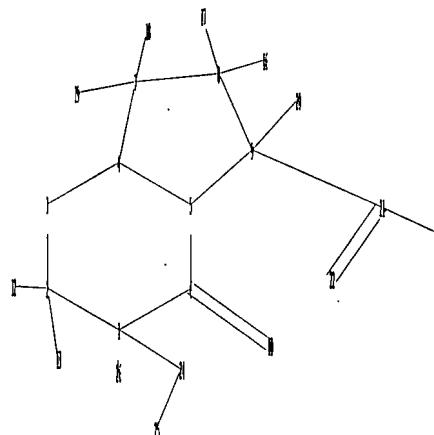
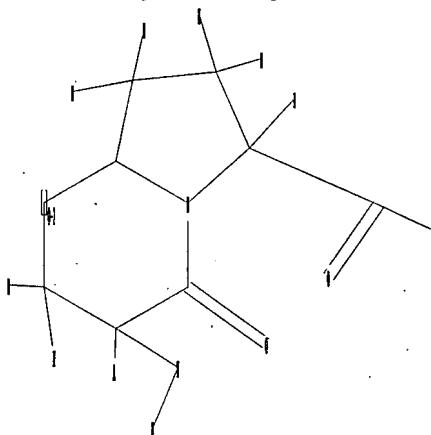
TSCA INFORMATION NOW CURRENT THROUGH December 2, 2006

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=>
Uploading C:\Program Files\Stnexp\Queries\10563288a.str



chain nodes :

10 12 13 16 17 18 19 20 21 22 23 24 25 26

ring nodes :

1 2 3 4 5 6 7 8 9

chain bonds :

1-24 1-26 2-12 2-13 6-10 7-18 7-19 8-16 8-17 9-20 9-21 21-22 21-23

24-25

ring bonds :

1-2 1-6 2-3 3-4 4-5 4-7 5-6 5-9 7-8 8-9

exact/norm bonds :

1-2 1-6 1-24 1-26 2-3 3-4 4-5 5-6 5-9 6-10 21-22 21-23

exact bonds :

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isolated ring systems :

containing 1 :

Match level :

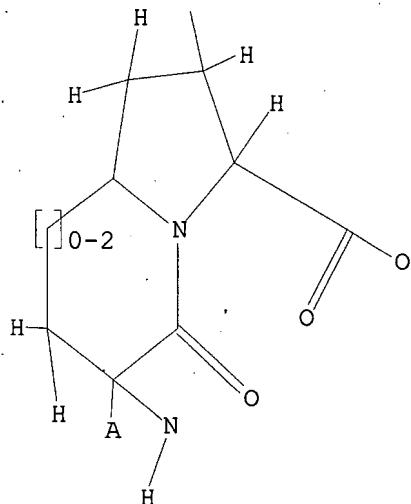
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12:CLASS 13:CLASS 16:CLASS 17:CLASS 18:CLASS 19:CLASS 20:CLASS 21:CLASS
22:CLASS 23:CLASS 24:CLASS 25:CLASS 26:CLASS

L1 STRUCTURE UPLOADED

=> d 11

L1 HAS NO ANSWERS

L1 STR



Structure attributes must be viewed using STN Express query preparation.

=> s 11 full

FULL SEARCH INITIATED 11:16:46 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 2321 TO ITERATE

100.0% PROCESSED 2321 ITERATIONS
SEARCH TIME: 00.00.01

43 ANSWERS

L2 43 SEA SSS FUL L1

=> file caplus

COST IN U.S. DOLLARS

SINCE FILE

ENTRY

FULL ESTIMATED COST

172.10

TOTAL

SESSION

172.31

FILE 'CAPLUS' ENTERED AT 11:16:54 ON 02 JUL 2007

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FILE COVERS 1907 - 2 Jul 2007 VOL 147 ISS 2
FILE LAST UPDATED: 1 Jul 2007 (20070701/ED)

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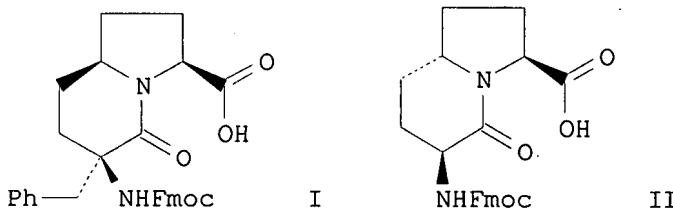
<http://www.cas.org/infopolicy.html>

=> s 12 full
L3 18 L2

=> s 13 and py<2003
22885672 PY<2003
L4 13 L3 AND PY<2003

=> d ibib abs hitstr tot

L4 ANSWER 1 OF 13 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2003:69868 CAPLUS
DOCUMENT NUMBER: 139:53275
TITLE: Cyclic RGD peptides containing azabicycloalkane reverse-turn mimics
AUTHOR(S): Belvisi, Laura; Caporale, Andrea; Colombo, Matteo; Manzoni, Leonardo; Potenza, Donatella; Scolastico, Carlo; Castorina, Massimo; Cati, Matilde; Giannini, Giuseppe; Pisano, Claudio
CORPORATE SOURCE: Dipartimento di Chimica Organica e Industriale, Universita degli Studi di Milano, Milan, I-20133, Italy
SOURCE: Helvetica Chimica Acta (2002), 85(12), 4353-4368
CODEN: HCACAV; ISSN: 0018-019X
PUBLISHER: Verlag Helvetica Chimica Acta
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 139:53275
GI



AB The Fmoc-protected lactams I and II were used to prepare cyclo(Arg-Gly-Asp-lactam) (III) and cyclo(Arg-Gly-Asp-Phe-lactam), which contain the Arg-Gly-Asp (RGD) recognition motif. Their solid-phase synthesis, conformational anal., and binding to purified $\alpha v\beta 3$ and $\alpha v\beta 5$ integrins are reported. Compound III was found to act as an active and selective inhibitor of the $\alpha v\beta 5$ integrin.

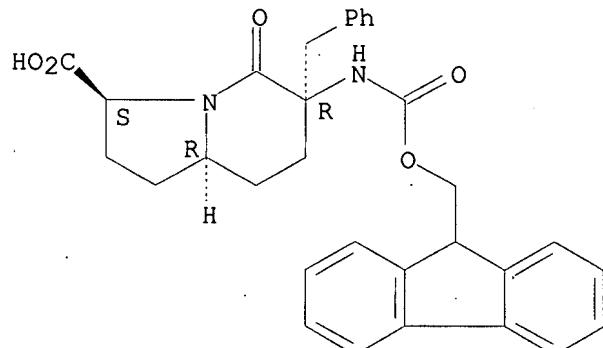
IT 220719-80-2

RL: RCT (Reactant); RACT (Reactant or reagent)
(solid-phase synthesis, conformational anal., and integrin-binding of cyclic RGD peptides containing azabicycloalkane reverse-turn mimics)

RN 220719-80-2 CAPLUS

CN 3-Indolizinecarboxylic acid, 6-[[[9H-fluoren-9-ylmethoxy)carbonyl]amino]octahydro-5-oxo-6-(phenylmethyl)-, (3S,6R,8aR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 49 THERE ARE 49 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 2 OF 13 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1999:529170 CAPLUS

DOCUMENT NUMBER: 131:157992

TITLE: Synthesis of β -sheet mimetics as inhibitors of protease, kinase, transcription factors, and protein-protein binding interactions

INVENTOR(S): Gaber, Maher N.; McMillian, Michael K.; Kahn, Michael S.; Tulinsky, John E.; Mathew, Jessymol

PATENT ASSIGNEE(S): Molecumetics Ltd., USA

SOURCE: PCT Int. Appl., 279 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9941276	A1	19990819	WO 1998-US2891	19980212 <--
W: AL, AM, AT, AU, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
CA 2319766	A1	19990819	CA 1998-2319766	19980212 <--
AU 9866557	A	19990830	AU 1998-66557	19980212 <--
AU 748887	B2	20020613		
EP 1053246	A1	20001122	EP 1998-908551	19980212 <--
EP 1053246	B1	20030102		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2002503674	T	20020205	JP 2000-531467	19980212 <--
AT 230414	T	20030115	AT 1998-908551	19980212
NZ 505980	A	20030131	NZ 1998-505980	19980212
ES 2192764	T3	20031016	ES 1998-908551	19980212
PRIORITY APPLN. INFO.:			WO 1998-US2891	A 19980212
OTHER SOURCE(S):	MARPAT	131:157992		
GI				

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

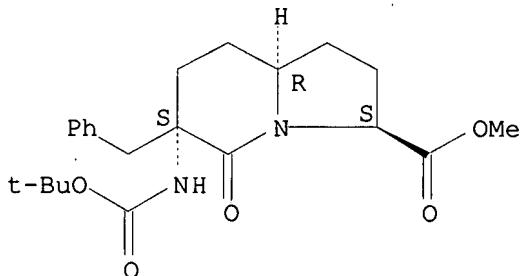
AB β -Sheet mimetics I [A = CO, (CH₂)₀₋₄, CO(CH₂)₁₋₃, (CH₂)₁₋₂₀, (CH₂)_{1-2S}; B = N, CH; C = CO, CO(CH₂)₁₋₃, (CH₂)₀₋₃, O, S, O(CH₂)₁₋₂, S(CH₂)₁₋₂; D = N, CR₄; E = CR₁(NH₂), NZ, CZR₁; F is an optional carbonyl moiety; R₁, R₃, R₄ is an amino acid side chain moiety or derivative; R₂, R_{2'} are ring substituents selected from an amino acid side chain moiety or derivative, where at least one R₂ together with C forms a fused (un)substituted homo- or heterocyclic ring; Y, Z represent the remainder of the mol.; any adjacent CH groups of the bicyclic ring may form a double bond] were prepared as inhibitors of protease, kinase, transcription factors, and protein-protein binding interactions. Thus, arginine derivative II was prepared and assayed for inhibition of various enzymes (IC₅₀ = 1.2 and 140 nM for thrombin and Factor VII, resp.).

IT 183442-92-4P 183442-93-5P 183624-03-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(synthesis of β -sheet mimetics as inhibitors of protease, kinase, transcription factors, and protein-protein binding interactions)

RN 183442-92-4 CAPLUS

CN 3-Indolizinecarboxylic acid, 6-[[[(1,1-dimethylethoxy)carbonyl]amino]octahydro-5-oxo-6-(phenylmethyl)-, methyl ester, (3R,6R,8aS)-rel- (9CI) (CA INDEX NAME)

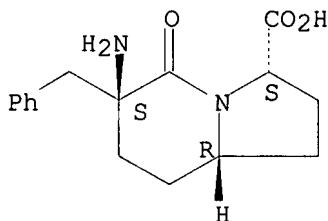
Relative stereochemistry.



RN 183442-93-5 CAPLUS

CN 3-Indolizinecarboxylic acid, 6-aminoctahydro-5-oxo-6-(phenylmethyl)-, (3R,6R,8aS)-rel- (9CI) (CA INDEX NAME)

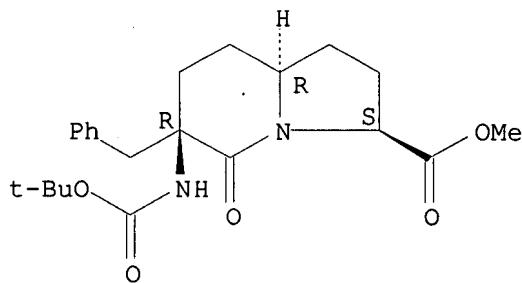
Relative stereochemistry.



RN 183624-03-5 CAPLUS

CN 3-Indolizinecarboxylic acid, 6-[[[(1,1-dimethylethoxy)carbonyl]amino]octahydro-5-oxo-6-(phenylmethyl)-, methyl ester, (3R,6S,8aS)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 3 OF 13 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1999:396495 CAPLUS

DOCUMENT NUMBER: 131:200003

TITLE: Synthesis of dipeptide secondary structure mimetics

AUTHOR(S): Eguchi, Masakatsu; Kim, Hwa-Ok; Gardner, Benjamin S.; Boatman, P. Douglas; Lee, Min S.; Nakanishi, Hiroshi; Kahn, Michael

CORPORATE SOURCE: Molecumetics Ltd., Bellevue, WA, 98005, USA

SOURCE: Peptides: Frontiers of Peptide Science, Proceedings of the American Peptide Symposium, 15th, Nashville, June 14-19, 1997 (1999), Meeting Date 1997, 212-213. Editor(s): Tam, James P.; Kaumaya, Pravin T. P. Kluwer: Dordrecht, Neth.

CODEN: 67UCAR

DOCUMENT TYPE: Conference

LANGUAGE: English

AB A symposium with four refs. on the synthesis and biol. activity of two diastereomeric title compds.

IT 203453-44-5P 203455-60-1P

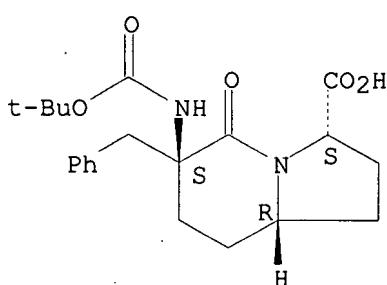
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and reaction of in the synthesis of dipeptide secondary structure mimetics as thrombin inhibitors)

RN 203453-44-5 CAPLUS

CN 3-Indolizinecarboxylic acid, 6-[[[(1,1-dimethylethoxy)carbonyl]amino]octahydro-5-oxo-6-(phenylmethyl)-, (3S,6S,8aR)- (9CI) (CA INDEX NAME)

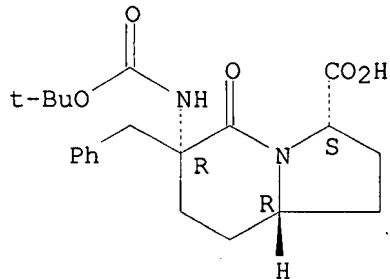
Absolute stereochemistry.



RN 203455-60-1 CAPLUS

CN 3-Indolizinecarboxylic acid, 6-[[[(1,1-dimethylethoxy)carbonyl]amino]octahydro-5-oxo-6-(phenylmethyl)-, (3S,6R,8aR)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 4 OF 13 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1999:89647 CAPLUS

DOCUMENT NUMBER: 130:182766

TITLE: Conformational preferences of peptides containing reverse-turn mimetic bicyclic lactams. Inverse γ -turns versus type-II' β -turns. Insights into β -hairpin stability

AUTHOR(S): Belvisi, Laura; Gennari, Cesare; Mielgo, Antonia; Potenza, Donatella; Scolastico, Carlo

CORPORATE SOURCE: Dipartimento Chimica Organica Industriale, Univ. Studi Milano, Milan, Italy

SOURCE: European Journal of Organic Chemistry. (1999), (2), 389-400

CODEN: EJOCFK; ISSN: 1434-193X

PUBLISHER: Wiley-VCH Verlag GmbH

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The conformational preferences of constrained peptides containing reverse-turn mimetic bicyclic lactams were investigated by NMR and IR. The exptl. results were complemented by computer modeling studies and show that the constrained peptides form an inverse γ -turn or a type-II' β -turn through intramol. H-bonding, depending on the nature of the reverse-turn mimic. In N-acetylated tetrapeptide mimics incorporating the two different bicyclic lactams, H(5) is available for either a γ -turn (7-membered ring with the CO group of the bicyclic lactam) or a β -turn (10-membered ring with the CO group of residue 2). Peptides incorporating a (5,7)-bicyclic lactam predominantly induce the γ -turn conformation, while those incorporating a (5,6)-bicyclic lactam can promote either a γ -turn or a β -turn conformation, with the β -turn usually being preferred and with varying degrees of β -hairpin formation.

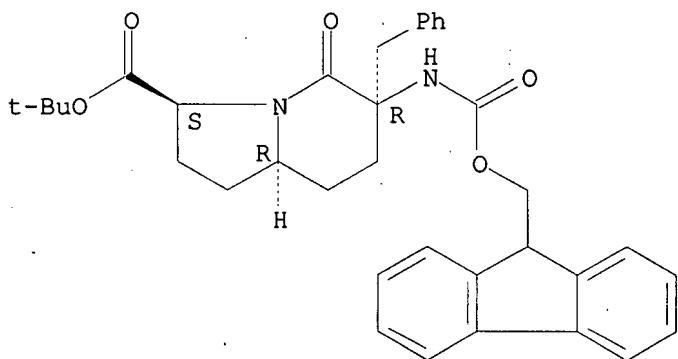
IT 220563-70-2

RL: PRP (Properties)
(conformational anal.)

RN 220563-70-2 CAPLUS

CN 3-Indolizinecarboxylic acid, 6-[[[(9H-fluoren-9-ylmethoxy)carbonyl]amino]octahydro-5-oxo-6-(phenylmethyl)-, 1,1-dimethylethyl ester, (3S,6R,8aR)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



REFERENCE COUNT: 68 THERE ARE 68 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 5 OF 13 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1999:89646 CAPLUS

DOCUMENT NUMBER: 130:196946

TITLE: Solid-phase synthesis of peptides containing reverse-turn mimetic bicyclic lactams

AUTHOR(S): Gennari, Cesare; Mielgo, Antonia; Potenza, Donatella; Scolastico, Carlo; Piarulli, Umberto; Manzoni, Leonardo

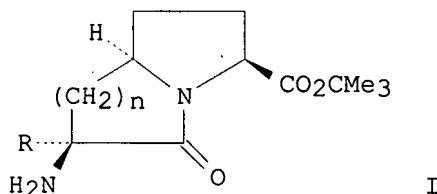
CORPORATE SOURCE: Dipartimento Chimica Organica Industriale, Univ. Studi Milano, Milan, Italy

SOURCE: European Journal of Organic Chemistry (1999), (2), 379-388

PUBLISHER: CODEN: EJOCFK; ISSN: 1434-193X
Wiley-VCH Verlag GmbH

DOCUMENT TYPE: Journal
LANGUAGE: English

GI



I

AB The solid-phase synthesis and characterization of a series of peptides containing reverse-turn mimetic bicyclic lactams I ($n = 3$, $R = H$; $n = 2$, $R = PhCH_2$) is reported. The bicyclic lactams possess high structural similarity to the 2 central residues of a β -turn. Amino acid conjugates of these bicyclic lactams were synthesized on solid supports following a 9-fluorenylmethoxycarbonyl (FMOC) protection strategy on Wang-Merrifield resin. Coupling between amino acids was accomplished by diisopropylcarbodiimide (DIC)/hydroxyazabenzotriazole (HOAt). Coupling between amino acids and the mimics was performed with the potent Carpino's reagent, O-(7-azabenzotriazol-1-yl)-N,N,N',N'-tetramethyluronium hexafluorophosphate (HATU). The final compds. were cleaved from the resin and obtained as N-acetylated Me esters or benzyl amides.

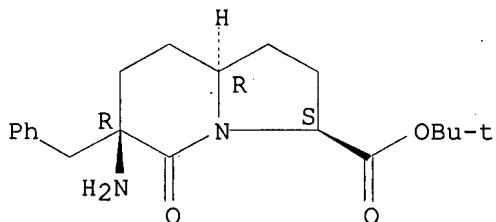
IT 208455-27-0

RL: RCT (Reactant); RACT (Reactant or reagent)
(solid-phase synthesis of peptides containing reverse-turn mimetic bicyclic lactams)

RN 208455-27-0 CAPLUS

CN 3-Indolizinecarboxylic acid, 6-amino-octahydro-5-oxo-6-(phenylmethyl)-, 1,1-dimethylethyl ester, (3S,6R,8aR)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



IT 220563-70-2P 220719-80-2P

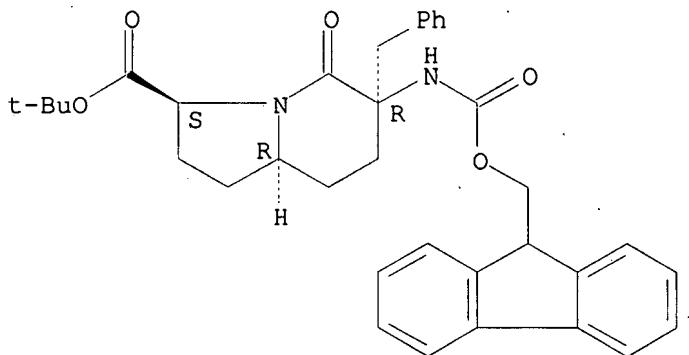
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(solid-phase synthesis of peptides containing reverse-turn mimetic bicyclic lactams)

RN 220563-70-2 CAPLUS

CN 3-Indolizinecarboxylic acid, 6-[(9H-fluoren-9-ylmethoxy)carbonyl]amino]octahydro-5-oxo-6-(phenylmethyl)-, 1,1-dimethylethyl ester, (3S,6R,8aR)- (9CI) (CA INDEX NAME)

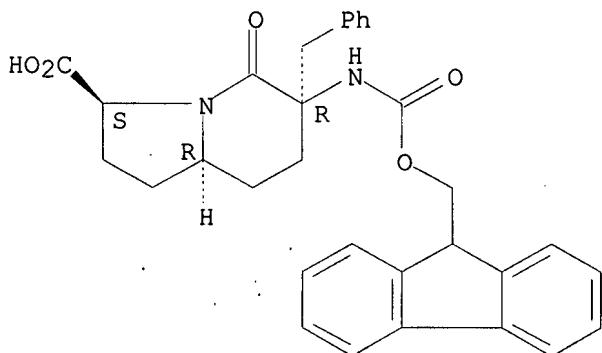
Absolute stereochemistry. Rotation (+).



RN 220719-80-2 CAPLUS

CN 3-Indolizinecarboxylic acid, 6-[(9H-fluoren-9-ylmethoxy)carbonyl]amino]octahydro-5-oxo-6-(phenylmethyl)-, (3S,6R,8aR)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



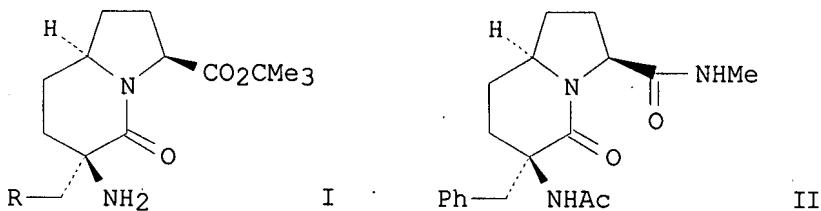
REFERENCE COUNT:

90

THERE ARE 90 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 6 OF 13 CAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1998:304016 CAPLUS
 DOCUMENT NUMBER: 129:41402
 TITLE: Stereoselective synthesis of 6,5-bicyclic reverse-turn peptidomimetics
 AUTHOR(S): Colombo, Lino; Di Giacomo, Marcello; Brusotti, Gloria;
 Sardone, Nicola; Angiolini, Mauro; Belvisi, Laura;
 Maffioli, Sonia; Manzoni, Leonardo; Scolastico, Carlo
 CORPORATE SOURCE: Pharmaceutical Chemistry Department, University of
 Pavia, Pavia, 27100, Italy
 SOURCE: Tetrahedron (1998), 54(20), 5325-5336
 CODEN: TETRAB; ISSN: 0040-4020
 PUBLISHER: Elsevier Science Ltd.
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 129:41402
 GI



AB A flexible stereoselective synthetic scheme was developed to prepare 6,5-fused bicyclic lactams I (R = Ph, 1-naphthyl, 2-naphthyl), that mol. mechanics calcns. revealed to have a potential as reverse-turn mimetics. The convergence of the synthetic sequence was achieved by attachment of a properly substituted malonate unit $\text{RCH}_2\text{CH}(\text{CO}_2\text{H})\text{CO}_2\text{Me}$ to (2S)-cis-5-(2-hydroxyethyl)proline tert-Bu ester. Stereoselective intramol. alkylation of the malonate afforded the 6-membered lactam fused to the 2-carbalkoxy pyrrolidine nucleus. X-ray crystallog. of advanced synthetic derivative II allowed the unequivocal assignment of the configuration at the newly created quaternary stereocenter as R.

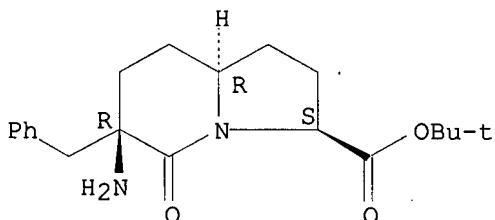
IT 208455-27-0P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(stereoselective synthesis of bicyclic reverse-turn peptidomimetics)

RN 208455-27-0 CAPLUS

CN 3-Indolizinecarboxylic acid, 6-aminoctahydro-5-oxo-6-(phenylmethyl)-, 1,1-dimethylethyl ester, (3S,6R,8aR)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

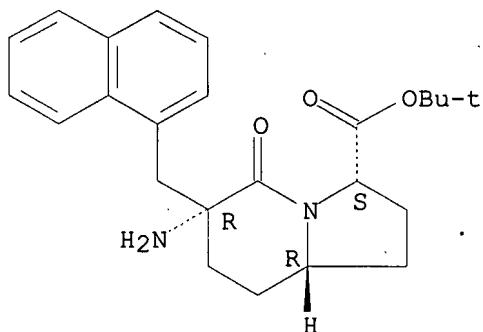


IT 208455-28-1P 208455-29-2P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (stereoselective synthesis of bicyclic reverse-turn peptidomimetics)

RN 208455-28-1 CAPLUS

CN 3-Indolizinecarboxylic acid, 6-aminoctahydro-6-(1-naphthalenylmethyl)-5-oxo-, 1,1-dimethylethyl ester, (3S,6R,8aR)- (9CI) (CA INDEX NAME)

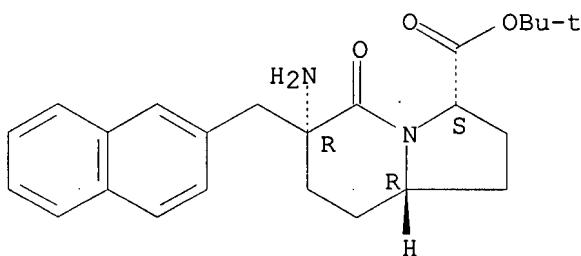
Absolute stereochemistry. Rotation (-).



RN 208455-29-2 CAPLUS

CN 3-Indolizinecarboxylic acid, 6-aminoctahydro-6-(2-naphthalenylmethyl)-5-oxo-, 1,1-dimethylethyl ester, (3S,6R,8aR)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 7 OF 13 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1998:112235 CAPLUS

DOCUMENT NUMBER: 128:192934

TITLE: Preparation of peptide β -sheet mimetics as protease and kinase inhibitors and as inhibitors of transcription factors

INVENTOR(S): Kahn, Michael; Qabar, Maher Nicola; McMillan, Michael Kim; Ogbu, Cyprian Okwara; Eguchi, Masakatsu; Kim, Hwa-ok; Boatman, Patrick Douglas, Jr.; Urban, Jan; et al.

PATENT ASSIGNEE(S): Molecumetics Ltd., USA

SOURCE: PCT Int. Appl., 250 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 3

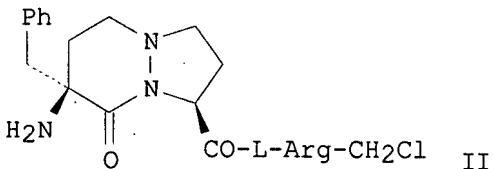
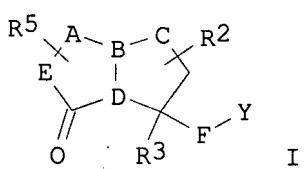
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9805333	A1	19980212	WO 1997-US13622	19970805 <--
W: AL, AM, AT, AU, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, AZ				

RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR,
 GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA,
 GN, ML, MR, NE, SN, TD, TG
 CA 2262900 A1 19980212 CA 1997-2262900 19970805 <--
 AU 9739058 A 19980225 AU 1997-39058 19970805 <--
 AU 732174 B2 20010412
 EP 915700 A1 19990519 EP 1997-936371 19970805 <--
 EP 915700 B1 20060322
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
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 NZ 334227 A 20001027 NZ 1997-334227 19970805 <--
 JP 2001524931 T 20011204 JP 1998-508118 19970805 <--
 AT 320811 T 20060415 AT 1997-936371 19970805
 EP 1661566 A2 20060531 EP 2006-130 19970805
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, SI, LT, LV, FI, RO, AL
 ES 2262184 T3 20061116 ES 1997-936371 19970805
 US 6245764 B1 20010612 US 1998-9665 19980120 <--
 US 6117896 A 20000912 US 1998-22934 19980212 <--
 NO 9900522 A 19990330 NO 1999-522 19990204 <--
 KR 2000029838 A 20000525 KR 1999-700994 19990205 <--
 US 6372744 B1 20020416 US 2000-501052 20000209 <--
 US 6699869 B1 20040302 US 2000-561107 20000428
 US 2003027819 A1 20030206 US 2001-960864 20010921
 US 2004230035 A1 20041118 US 2003-745471 20031222
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 US 2006293372 A1 20061228 US 2004-774043 20040205
 US 2006276408 A1 20061207 US 2006-448412 20060607
 PRIORITY APPLN. INFO.:
 US 1996-692420 A 19960805
 US 1996-725073 A 19961002
 US 1997-797915 A 19970210
 US 1997-47067P P 19970519
 US 1995-410518 B2 19950324
 US 1995-549006 B2 19951027
 US 1996-624690 B2 19960325
 EP 1997-936371 A3 19970805
 WO 1997-US13622 W 19970805
 US 1998-9665 A3 19980120
 US 1998-22934 A3 19980212
 US 2000-501052 A1 20000209
 US 2000-561107 A1 20000428
 US 2001-960864 B1 20010921
 US 2003-745471 A1 20031222

OTHER SOURCE(S):
GI

MARPAT 128:192934



AB β -Sheet mimetics I [A = CO, (CH₂)₀₋₄, CO(CH₂)₁₋₃, (CH₂)₁₋₂CO, (CH₂)₁₋₂S; B = N, CH; C = CO, CO(CH₂)₁₋₃, (CH₂)₀₋₃, O, S, O(CH₂)₁₋₂, S(CH₂)₁₋₂; D = N, CR₄; E = CR₁NH₂, NZ, CR₁Z; F = bond, CO; R₁, R₂, R₄, R₅ = independently amino acid side chain or derivative thereof; R₂ = amino acid side chain or derivative thereof, or taken with C forms a fused substituted or unsubstituted homocyclic or heterocyclic ring; R₃ = amino acid side chain or derivative thereof, or taken with C forms a bridging moiety]

(CH₂)₁₋₂, O, S; Y, Z represent the remainder of the mol., with the proviso that any two adjacent CH groups of the bicyclic ring may form a double bond] and methods relating to the same are disclosed. The β -sheet mimetics have utility as protease and kinase inhibitors, as well as inhibitors of transcription factors. Methods of the invention include administration of a β -sheet mimetic, or use of the same for the manufacture of a medicament for treatment of a variety of conditions associated with the targeted protease, kinase and/or transcription factor. Thus, bicyclic peptide mimic II was prepared in several steps from phenylalanine Me ester, Et acrylate, and a protected arginine chloromethyl ketone derivative II was tested for inhibitory activity against a variety of serine proteases, and showed IC₅₀ = 1.2 nM against thrombin in an in vitro assay.

IT 203453-43-4P 203453-44-5P 203455-59-8P
203455-60-1P

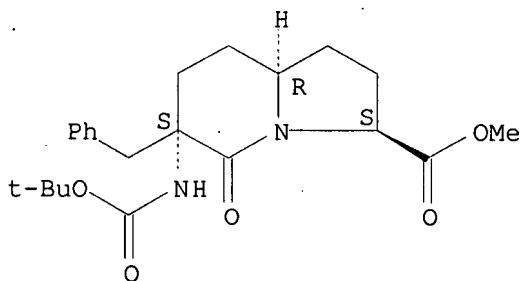
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of peptide β -sheet mimetics as protease and kinase inhibitors and as inhibitors of transcription factors)

RN 203453-43-4 CAPLUS

CN 3-Indolizinecarboxylic acid, 6-[[[(1,1-dimethylethoxy)carbonyl]amino]octahydro-5-oxo-6-(phenylmethyl)-, methyl ester, [3S-(3 α ; 6 β , 8 α β)]- (9CI). (CA INDEX NAME)

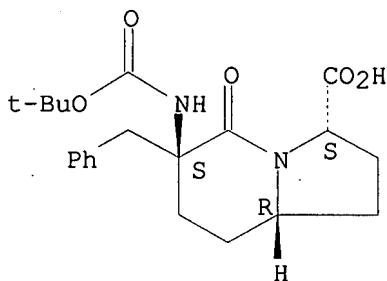
Absolute stereochemistry.



RN 203453-44-5 CAPLUS

CN 3-Indolizinecarboxylic acid, 6-[[[(1,1-dimethylethoxy)carbonyl]amino]octahydro-5-oxo-6-(phenylmethyl)-, (3S, 6S, 8aR)- (9CI) (CA INDEX NAME)

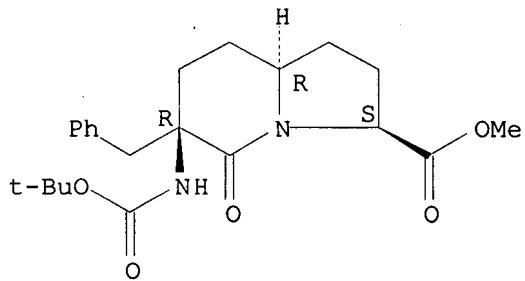
Absolute stereochemistry.



RN 203455-59-8 CAPLUS

CN 3-Indolizinecarboxylic acid, 6-[[[(1,1-dimethylethoxy)carbonyl]amino]octahydro-5-oxo-6-(phenylmethyl)-, methyl ester, [3S-(3 α , 6 α , 8 α β)]- (9CI) (CA INDEX NAME)

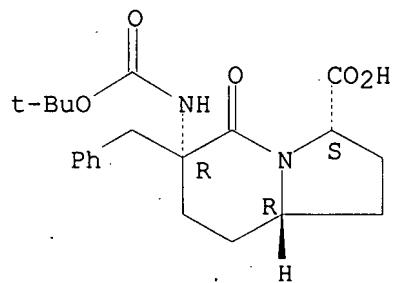
Absolute stereochemistry.



RN 203455-60-1 CAPLUS

CN 3-Indolizinecarboxylic acid, 6-[(1,1-dimethylethoxy)carbonyl]amino]octahydro-5-oxo-6-(phenylmethyl)-, (3S,6R,8aR)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 8 OF 13 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1997:633831 CAPLUS

DOCUMENT NUMBER: 127:293616

TITLE: Design and synthesis of conformationally constrained arginal thrombin inhibitors

AUTHOR(S): Salimbeni, Aldo; Paleari, Fabio; Canevotti, Renato; Crisculoi, Marco; Lippi, Annalisa; Angiolini, Mauro; Belvisi, Laura; Scolastico, Carlo; Colombo, Lino
CORPORATE SOURCE: Lusofarmaco, Medicinal Chemistry Dep., Univ. Milano, Milan, 20132, Italy

SOURCE: Bioorganic & Medicinal Chemistry Letters (1997), 7(17), 2205-2210

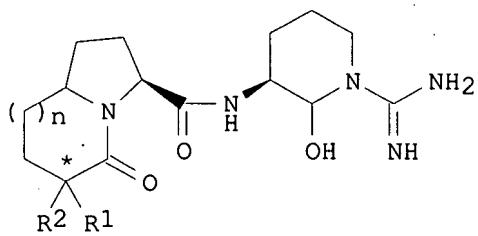
CODEN: BMCLE8; ISSN: 0960-894X

PUBLISHER: Elsevier

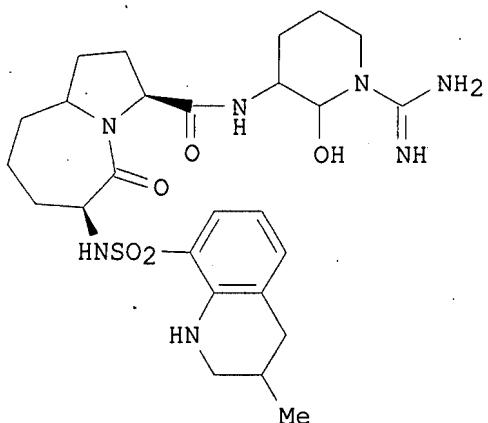
DOCUMENT TYPE: Journal

LANGUAGE: English

GI



I



II

AB A series of conformationally constrained arginal thrombin inhibitors, e.g. I ($R_1 = PhCH_2, NHAc, NHSO_2CH_2Ph$, 1-naphthylsulfonylamino; $R_2 = H, CH_2Ph$; $n = 1, 2$; stereo at * center is RS, S, or R) was prepared starting from 5,6 or 5,7 bicyclic lactam structures, that an indirect approach of x-ray structure-based design indicated as D-Phe-Pro dipeptide mimetics. The tetrahydroquinolyl sulfonamido derivs. II (LR-D/009) displayed the best inhibitory potency ($IC_{50} = 0.018 \mu\text{m}$), with good selectivity over plasmin and trypsin.

IT 196937-03-8 196937-04-9 196937-05-0

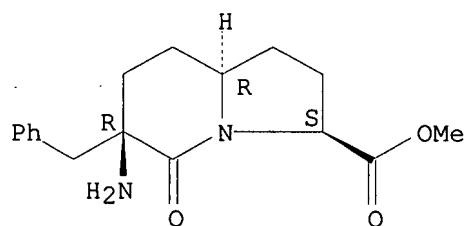
RL: PRP (Properties)

(design and synthesis of conformationally constrained arginal thrombin inhibitors)

RN 196937-03-8 CAPLUS

CN 3-Indolizinecarboxylic acid, 6-aminoctahydro-5-oxo-6-(phenylmethyl)-, methyl ester, [3S-(3 α ,6 α ,8 β)]- (9CI) (CA INDEX NAME)

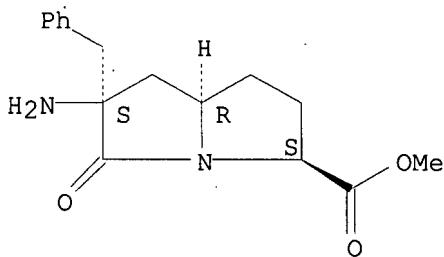
Absolute stereochemistry.



RN 196937-04-9 CAPLUS

CN 1H-Pyrrolizine-3-carboxylic acid, 6-aminohexahydro-5-oxo-6-(phenylmethyl)-, methyl ester, [3S-(3 α ,6 α ,7 β)]- (9CI) (CA INDEX NAME)

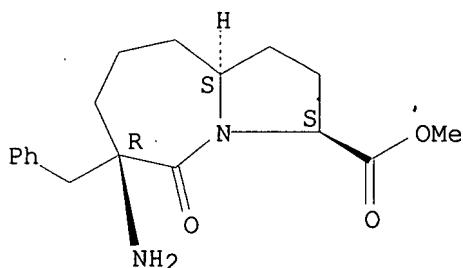
Absolute stereochemistry.



RN 196937-05-0 CAPLUS

CN 1H-Pyrrolo[1,2-a]azepine-3-carboxylic acid, 6-amino-5-oxo-6-(phenylmethyl)-, methyl ester, (3S,6R,9aS)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



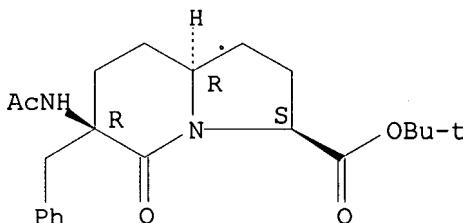
IT 162284-68-6P 188126-79-6P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(design and synthesis of conformationally constrained arginal thrombin inhibitors)

RN 162284-68-6 CAPLUS

CN 3-Indolizinecarboxylic acid, 6-(acetylamino)octahydro-5-oxo-6-(phenylmethyl)-, 1,1-dimethylethyl ester, [3S-(3α,6α,8aβ)]- (9CI) (CA INDEX NAME)

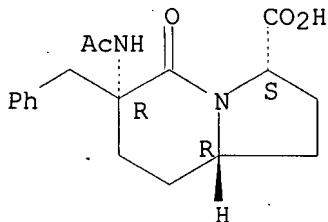
Absolute stereochemistry.



RN 188126-79-6 CAPLUS

CN 3-Indolizinecarboxylic acid, 6-(acetylamino)octahydro-5-oxo-6-(phenylmethyl)-, [3S-(3α,6α,8aβ)]- (9CI) (CA INDEX NAME)

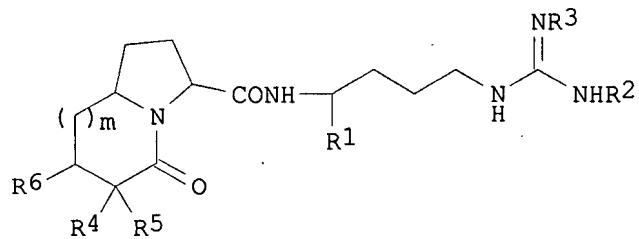
Absolute stereochemistry.



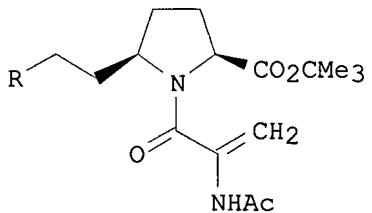
REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 9 OF 13 CAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1997:231088 CAPLUS
 DOCUMENT NUMBER: 126:212450
 TITLE: Preparation of arginine-containing bicyclic lactam derivatives as thrombin inhibitors
 INVENTOR(S): Salimbeni, Aldo; Paleari, Fabio; Scolastico, Carlo; Criscuoli, Marco
 PATENT ASSIGNEE(S): A. Menarini Industrie Farmaceutiche Riunite S.R.L., Italy; Salimbeni, Aldo; Paleari, Fabio; Scolastico, Carlo; Criscuoli, Marco
 SOURCE: PCT Int. Appl., 41 pp.
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

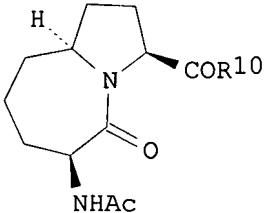
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9705160	A1	19970213	WO 1996-EP3167	19960718 <--
W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM				
AU 9667342	A	19970226	AU 1996-67342	19960718 <--
PRIORITY APPLN. INFO.:			IT 1995-MI1688	A 19950801
			WO 1996-EP3167	W 19960718
OTHER SOURCE(S): GI	MARPAT	126:212450		



I



II



III

AB Bicyclic lactams containing an arginine residue, i.e. I [$m = 0-3$; R1 = CHO, CH₂OH, CO₂H, B(OH)₂; R2, R3 = independently H, CO₂R₇, C₁₋₄ alkyl, CH₂Ph, NO₂; R4, R5 = independently H, NR₈R₉, straight or branched C₁₋₇ alkyl, C₃₋₇ cycloalkyl, or an arylalkyl or heteroarylalkyl group optionally substituted by one or more groups such as halo, OMe, CF₃, straight or branched C₁₋₇ alkyl; R6 = H, straight or branched C₁₋₇ alkyl, C₃₋₇ cycloalkyl, or an aryl, heteroaryl, arylalkyl or heteroarylalkyl group optionally substituted by one or more groups such as halo, OMe, CF₃, straight or branched C₁₋₇ alkyl; R7 = C₁₋₄ alkyl, CH₂Ph; R8, R9 = independently H, straight or branched C₁₋₇ alkyl, W-Q; W = CO, SO₂; Q = Ph, CH₂Ph, quinolyl, naphththylmethyl, tetrahydroquinolyl, optionally substituted by one or more groups such as halo, straight or branched C₁₋₇ alkyl, OMe, CF₃], which can be of use in therapy as thrombin inhibitors, are disclosed. Thus, amidation of (2S,5R)-2-tert-butoxycarbonyl-5-(2-hydroxyethyl)pyrrolidine with 2-acetylaminooacrylic acid gave 80% amide II (R = OH). Iodination of alc. II (R = OH) via its mesylate, followed by reductive radical cyclization in the presence of Bu₃SnH gave octahydropyrrolo[1,2-a]azepin-5-one III (R₁₀ = OCMe₃). Deesterification of III (R₁₀ = OCMe₃) with CF₃CO₂H, followed by coupling with N_ω-benzyloxycarbonyl-L-arginine lactam, hydride reduction, and catalytic deprotection gave arginine aldehyde derivative III (R₁₀ = L-Arg-H).

IT 162284-68-6P 188126-64-9P 188126-66-1P
188126-68-3P 188126-74-1P 188126-79-6P

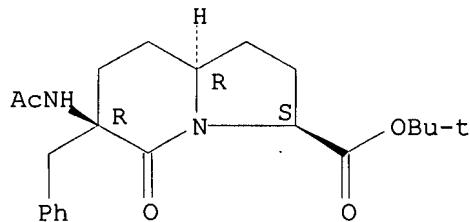
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of arginine-containing bicyclic lactam derivs. as thrombin inhibitors)

RN 162284-68-6 CAPLUS

CN 3-Indolizinecarboxylic acid, 6-(acetylamino)octahydro-5-oxo-6-(phenylmethyl)-, 1,1-dimethylethyl ester, [3S-(3 α ,6 α ,8a β)]- (9CI) (CA INDEX NAME)

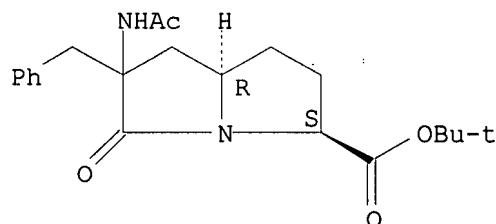
Absolute stereochemistry.



RN 188126-64-9 CAPLUS

CN 1H-Pyrrolizine-3-carboxylic acid, 6-(acetylamino)hexahydro-5-oxo-6-(phenylmethyl)-, 1,1-dimethylethyl ester, (3S,7aR)- (9CI) (CA INDEX NAME)

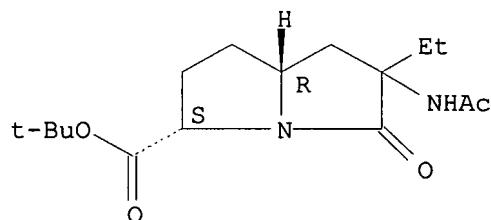
Absolute stereochemistry.



RN 188126-66-1 CAPLUS

CN 1H-Pyrrolizine-3-carboxylic acid, 6-(acetylamino)-6-ethylhexahydro-5-oxo-, 1,1-dimethylethyl ester, (3S,7aR)- (9CI) (CA INDEX NAME)

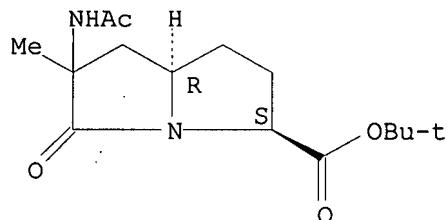
Absolute stereochemistry.



RN 188126-68-3 CAPLUS

CN 1H-Pyrrolizine-3-carboxylic acid, 6-(acetylamino)hexahydro-6-methyl-5-oxo-, 1,1-dimethylethyl ester, (3S,7aR)- (9CI) (CA INDEX NAME)

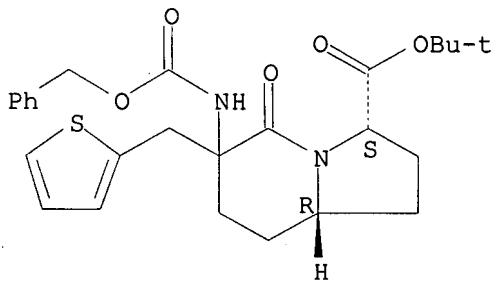
Absolute stereochemistry.



RN 188126-74-1 CAPLUS

CN 3-Indolizinecarboxylic acid, octahydro-5-oxo-6-[(phenylmethoxy)carbonyl]amino]-6-(2-thienylmethyl)-, 1,1-dimethylethyl ester, (3S,8aR)-[partial]- (9CI) (CA INDEX NAME)

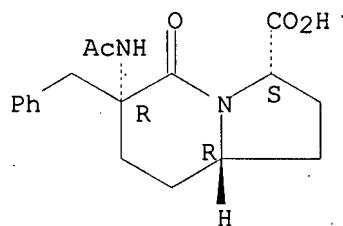
Absolute stereochemistry.



RN 188126-79-6 CAPLUS

CN 3-Indolizinecarboxylic acid, 6-(acetylaminoo)octahydro-5-oxo-6-(phenylmethyl)-, [3S-(3α,6α,8aβ)]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L4 ANSWER 10 OF 13 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1996:731812 CAPLUS

DOCUMENT NUMBER: 126:8708

TITLE: Preparation of beta-sheet mimetics of peptides or proteins as protease inhibitors

INVENTOR(S): Kahn, Michael

PATENT ASSIGNEE(S): Molecumetics Ltd., USA

SOURCE: PCT Int. Appl., 141 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

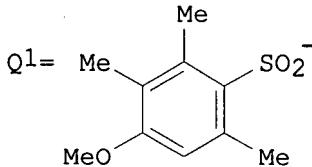
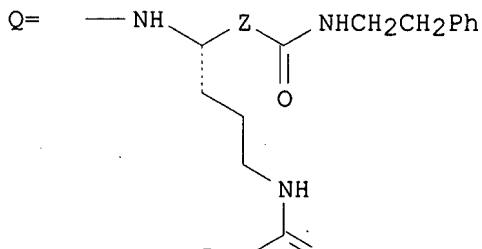
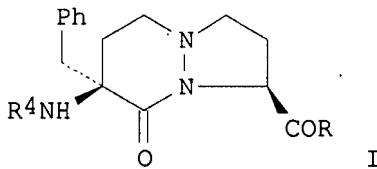
FAMILY ACC. NUM. COUNT: 3

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9630396	A1	19961003	WO 1996-US4115	19960325 <--
W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN				
AU 9653729	A	19961016	AU 1996-53729	19960325 <--
AU 713530	B2	19991202		
EP 815123	A1	19980107	EP 1996-910566	19960325 <--
EP 815123	B1	20011004		
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JP 10508035	T	19980804	JP 1996-529594	19960325 <--
JP 2000319295	A	20001121	JP 2000-79170	19960325 <--
AT 206433	T	20011015	AT 1996-910566	19960325 <--
US 6020331	A	20000201	US 1998-9386	19980120 <--
US 6245764	B1	20010612	US 1998-9665	19980120 <--
US 6586426	B1	20030701	US 1999-443055	19991118

US 6699869	B1	20040302	US 2000-561107	20000428
US 2003191109	A1	20031009	US 2001-8770	20011025
US 2004230035	A1	20041118	US 2003-745471	20031222
US 7125872	B2	20061024		
JP 2004131511	A	20040430	JP 2004-17703	20040126
US 2006276408	A1	20061207	US 2006-448412	20060607
PRIORITY APPLN. INFO.:				
			US 1995-410518	A 19950324
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			JP 2000-79170	A3 19960325
			US 1996-624690	B2 19960325
			US 1996-624695	B1 19960325
			WO 1996-US4115	W 19960325
			US 1996-725073	B1 19961002
			US 1998-4968	B1 19980109
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			US 2000-561107	A1 20000428
			US 2003-745471	A1 20031222

OTHER SOURCE(S): MARPAT 126:8708
GI



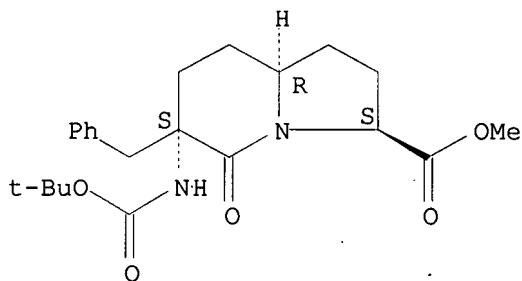
AB There are disclosed β -sheet mimetics [I; R1 - R3 = amino acid side chain moiety or its derivative; A = CO, (CH₂)₁₋₄, (CH₂)_{1-2-O}, (CH₂)_{1-2-S}; B = N, CH; C = CO, (CH₂)₁₋₃, O, S, O(CH₂)₁₋₂, S(CH₂)₁₋₂; Y, Z = the remainder of the mol.; or any 2 adjacent CH groups of the bicyclic ring may form a double bond; with the provisos that (1) R1 = an amino acid side chain moiety or derivative thereof other than H, (2) when R1 = CH₂Ph, R2 = R3 = H, A = CH₂CH₂, and B = CH, and then C \neq CH₂, (3) when R1 = me, R2 and R3 = H, A = CH₂O, B = CH, and then C \neq CH₂, and (4) when R1 = CH₂Ph, R2 = R3 = H, A = CH₂, B = CH, and then C \neq S] and methods relating to the same for imparting or stabilizing the β -sheet structure of a peptide, protein or mol. In one aspect, the β -sheet mimetics are covalently attached at the end or within the length of the peptide or protein. The β -sheet mimetics have utility as protease inhibitors generally, including activity as serine protease inhibitors such as thrombin, elastase, and Factor X. Thus, diazabicyclo[4.3.0]nonane derivative (II; R = OH, R4 = Boc) (preparation given) was condensed with amino alc. (H-Q; R5 = Q1, Z = CHOH) using 1-ethyl-3-(3-dimethylaminopropyl)carbodiimide hydrochloride, HOBt hydrate, and (Me₂CH)₂NEt in THF to give amide alc. II (R = Q, R5 = Q1, Z = CHOH, R4 = Boc), which was oxidized by Dess-Martin periodinane in CH₂Cl₂ and deprotected with 95% aqueous CF₃CO₂H and thioanisole to give the β -sheet mimetic II (R = Q, R5 = H, Z = CO, R4 = H). The latter compound in vitro inhibited various serine proteases such as.

thrombin, factor VII, factor X, and trypsin, e.g. with K_i of 7.10 + 10-11 M for thrombin.

IT 183442-92-4P 183442-93-5P 183442-97-9P
 183624-03-5P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation of beta-sheet mimetics of peptides or proteins as protease inhibitors)

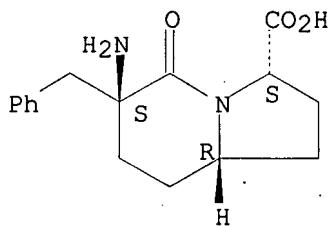
RN 183442-92-4 CAPLUS
 CN 3-Indolizinecarboxylic acid, 6-[[[(1,1-dimethylethoxy)carbonyl]amino]octahydro-5-oxo-6-(phenylmethyl)-, methyl ester, (3R,6R,8aS)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



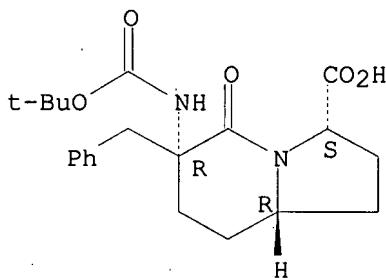
RN 183442-93-5 CAPLUS
 CN 3-Indolizinecarboxylic acid, 6-amino-octahydro-5-oxo-6-(phenylmethyl)-, (3R,6R,8aS)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 183442-97-9 CAPLUS
 CN 3-Indolizinecarboxylic acid, 6-[[[(1,1-dimethylethoxy)carbonyl]amino]octahydro-5-oxo-6-(phenylmethyl)-, (3α,6α,8aβ)- (9CI) (CA INDEX NAME)

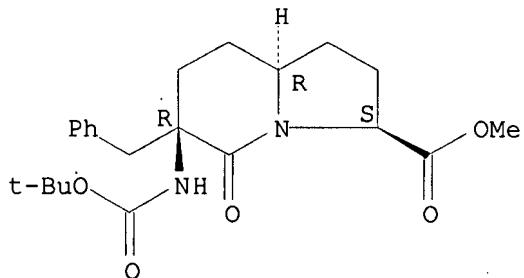
Relative stereochemistry.



RN 183624-03-5 CAPLUS
 CN 3-Indolizinecarboxylic acid, 6-[[[(1,1-dimethylethoxy)carbonyl]amino]octahydro-5-oxo-6-(phenylmethyl)-, methyl ester, (3R,6S,8aS)-rel- (9CI) (CA INDEX NAME)

INDEX NAME)

Relative stereochemistry.



L4 ANSWER 11 OF 13 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1996:731810 CAPLUS

DOCUMENT NUMBER: 126:8707

TITLE: Preparation of beta-sheet mimetics of peptides or proteins as inhibitors of biologically active peptides or proteins

INVENTOR(S): Kahn, Michael

PATENT ASSIGNEE(S): Molecumetics Ltd., USA

SOURCE: PCT Int. Appl., 158 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 3

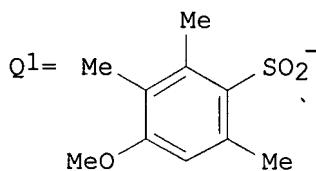
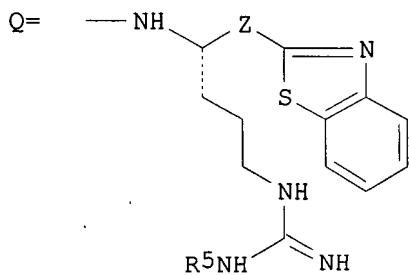
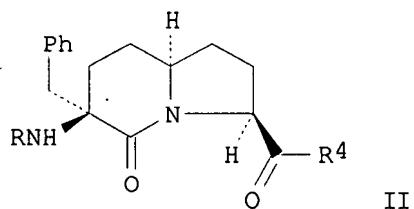
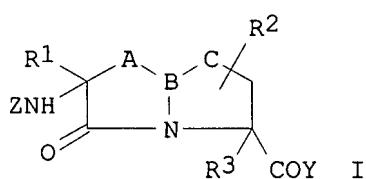
PATENT INFORMATION:

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WO 9630035	A1	19961003	WO 1996-US4044	19960325 <--
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AU 712581	B2	19991111		
EP 817642	A1	19980114	EP 1996-910547	19960325 <--
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JP 2000319295	A	20001121	JP 2000-79170	19960325 <--
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US 6245764	B1	20010612	US 1998-9665	19980120 <--
US 6586426	B1	20030701	US 1999-443055	19991118
US 6699869	B1	20040302	US 2000-561107	20000428
US 2003191109	A1	20031009	US 2001-8770	20011025
US 2004230035	A1	20041118	US 2003-745471	20031222
US 7125872	B2	20061024		
JP 2004131511	A	20040430	JP 2004-17703	20040126
US 2006276408	A1	20061207	US 2006-448412	20060607
PRIORITY APPLN. INFO.:			US 1995-410518	A 19950324
			US 1995-549006	A 19951027
			JP 1996-529594	A3 19960325
			JP 2000-79170	A3 19960325

US 1996-624690	B2 19960325
US 1996-624695	B1 19960325
WO 1996-US4044	W 19960325
US 1996-725073	B1 19961002
US 1998-4968	B1 19980109
US 1998-9386	A3 19980120
US 1998-9665	A3 19980120
US 2000-561107	A1 20000428
US 2003-745471	A1 20031222

OTHER SOURCE(S) :
GI

MARPAT 126:8707



AB There are disclosed β -sheet mimetics [I; R1 - R3 = amino acid side chain moiety or its derivative; A = CO, (CH₂)₁₋₄, (CH₂)_{1-2-O}, (CH₂)_{1-2-S}; B = N, CH; C = CO, (CH₂)₁₋₃, O, S, O(CH₂)₁₋₂, S(CH₂)₁₋₂; Y, Z = the remainder of the mol.; or any 2 adjacent CH groups of the bicyclic ring may form a double bond] and methods relating to the same for imparting or stabilizing the β -sheet structure of a peptide, protein or mol. In one aspect, the β -sheet mimetics are covalently attached at the end or within the length of the peptide or protein. The β -sheet mimetics have utility as inhibitors of one or more of proteases, kinases, CAAX motif (Ras prenylation of the Cys within its C-terminal CAAX sequence by farnesyl transferase, wherein "A" is defined as an amino acid with a hydrophobic side chain and "X" is another amino acid), peptides binding to SH2 domains, and MHC-I and/or MHC-II (major histocompatibility complex class I and class II) presentation of peptides to T cell receptors in warm-blooded animals. Thus, azabicyclo[4.3.0]nonane derivative (II; R = Boc, R4 = OH) (preparation given) was condensed with benzothiazolylarginol derivative (H-Q.CF₃CO₂H; R5 = Q1, Z = CHOH) using 1-ethyl-3-(3-dimethylaminopropyl)carbodiimide hydrochloride, HOEt, and (Me₂CH)₂NEt in THF to give arginol derivative II (R = Boc, R4 = Q, R5 = Q1 Z = CHOH), which was oxidized by Dess-Martin periodinane in CH₂C₁₂ to arginine derivative II (R = Boc, R4 = Q, R5 = Q1 Z = CO) and deprotected 95% aqueous CF₃CO₂H and thioanisole at room temperature for 20 h to give, after HPLC purification, the β -sheet mimetic II (R = H, R4 = Q, R5 = H, Z = CO). The latter compound in vitro inhibited various serine proteases such as thrombin, factor VII, factor X, factor XI, urokinase, thrombin-thrombomodulin complex, activated protein C, plasmin, tissue plasminogen activator, trypsin, and tryptase, e.g. with Ki of 8.50 + 10⁻¹¹ M for thrombin.

IT 183442-92-4P 183442-93-5P 183442-97-9P
183624-03-5P

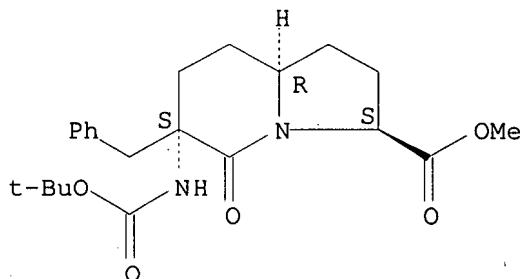
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of beta-sheet mimetics of peptides or proteins as inhibitors of biol. active peptides or proteins)

RN 183442-92-4 CAPLUS

CN 3-Indolizinecarboxylic acid, 6-[[[(1,1-dimethylethoxy)carbonyl]amino]octahydro-5-oxo-6-(phenylmethyl)-, methyl ester, (3R,6R,8aS)-rel- (9CI) (CA INDEX NAME)

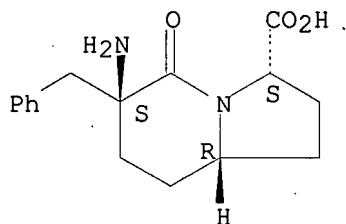
Relative stereochemistry.



RN 183442-93-5 CAPLUS

CN 3-Indolizinecarboxylic acid, 6-aminooctahydro-5-oxo-6-(phenylmethyl)-, (3R,6R,8aS)-rel- (9CI) (CA INDEX NAME)

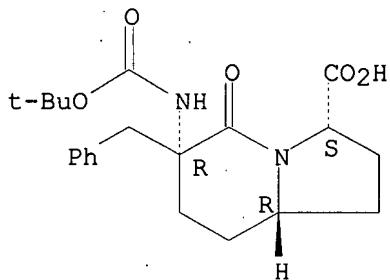
Relative stereochemistry.



RN 183442-97-9 CAPLUS

CN 3-Indolizinecarboxylic acid, 6-[[[(1,1-dimethylethoxy)carbonyl]amino]octahydro-5-oxo-6-(phenylmethyl)-, (3α,6α,8aβ)- (9CI) (CA INDEX NAME)

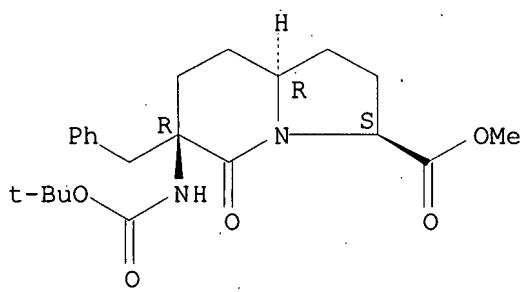
Relative stereochemistry.



RN 183624-03-5 CAPLUS

CN 3-Indolizinecarboxylic acid, 6-[[[(1,1-dimethylethoxy)carbonyl]amino]octahydro-5-oxo-6-(phenylmethyl)-, methyl ester, (3R,6S,8aS)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



L4 ANSWER 12 OF 13 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1996:662548 CAPLUS

DOCUMENT NUMBER: 126:19211

TITLE: Conformationally constrained dipeptides: synthesis of bicyclic lactams by stereoselective radical cyclizations

AUTHOR(S): Colombo, Lino; Di Giacomo, Marcello; Belvisi, Laura; Manzoni, Leonardo; Scolastico, Carlo; Salimbeni, Aldo

CORPORATE SOURCE: Dip. Chim. Farmaceutica, Univ. Pavia, Pavia, I-27100, Italy

SOURCE: Gazzetta Chimica Italiana (1996), 126(8), 543-554

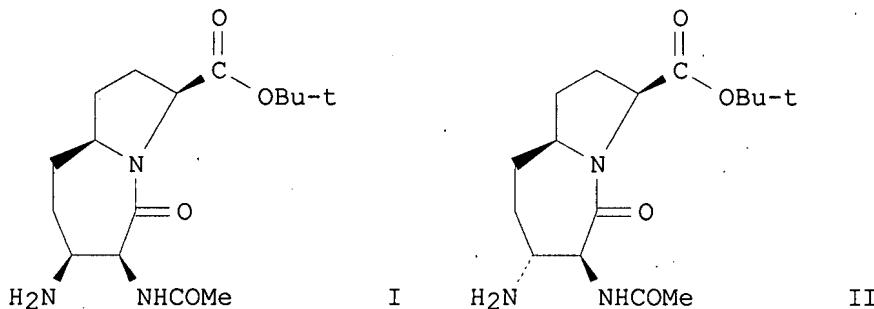
CODEN: GCITA9; ISSN: 0016-5603
PUBLISHER: Societa Chimica Italiana

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 126:19211

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AB Regioselective and stereoselective radical cyclization of β -substituted α -N-acetyl acrylamides was performed. This method led to the formation of 6,5- and 7,5-fused bicyclic lactams, which can be viewed as conformationally restricted dipeptide mimics. The peptide mimics I and II were prepared

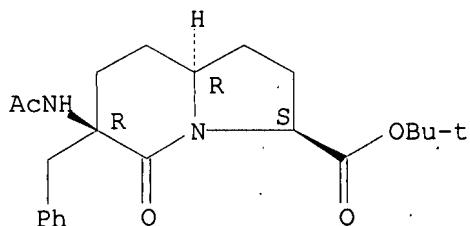
IT 162284-68-6P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of conformationally constrained dipeptide mimics by radical cyclization of β -substituted α -N-acetyl acrylamides)

RN 162284-68-6 CAPLUS

CN 3-Indolizinecarboxylic acid, 6-(acetylamino)octahydro-5-oxo-6-(phenylmethyl)-, 1,1-dimethylethyl ester, [3S-(3 α ,6 α ,8 α B)]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L4 ANSWER 13 OF 13 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1995:357314 CAPLUS

DOCUMENT NUMBER: 122:240379

TITLE: Conformationally constrained dipeptides: synthesis of 7,5- and 6,5-fused bicyclic lactams by stereoselective radical cyclizations

AUTHOR(S): Colombo, Lino; Di Giacomo, Marcello; Scolastico, Carlo; Manzoni, Leonardo; Belvisi, Laura; Molteni, Valentina

CORPORATE SOURCE: Dipart. Chim. Farm., Univ. Pavia, Pavia, I-27100, Italy

SOURCE: Tetrahedron Letters (1995), 36(4), 625-8
CODEN: TELEAY; ISSN: 0040-4039

PUBLISHER: Elsevier

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 122:240379

AB A study of radical cyclizations of β -substituted α -N-acetyl acrylamide have been performed: high level of regio- and stereoselectivity was obtained.

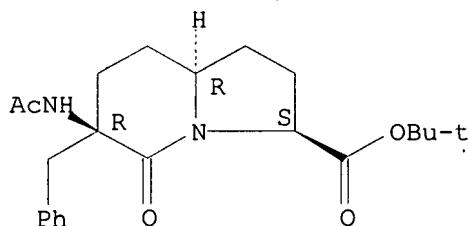
IT 162284-68-6P

RL: SPN (Synthetic preparation); PREP (Preparation)
(conformationally constrained dipeptides and synthesis of fused bicyclic lactams by stereoselective radical cyclizations)

RN 162284-68-6 CAPLUS

CN 3-Indolizinecarboxylic acid, 6-(acetylamino)octahydro-5-oxo-6-(phenylmethyl)-, 1,1-dimethylethyl ester, [3S-(3 α ,6 α ,8 $\alpha\beta$)]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



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